

REMARKS

Claims 2-3, 5-19, 24-25, 27-41, 46-47, 49-62, 87-88, and 90-104 remain in this case for consideration. Claims 2, 5-6, 9-15, 24, 27-28, 31-37, 46, 50, 53-58, 87, 90-91 and 94-98 have been amended to better define Applicants' invention. Support for Applicants' claim amendments can be found, among other places, in paragraphs 10, 19, 20 and 33 of Applicants' patent application.

A. Interview Summary

Applicants would first like to thank Examiner Ly for taking the time to speak over the telephone with Applicants' attorneys on October 10, 15 and 18, 2007 about how Applicants' invention differs from the cited prior art and how the claims can be reworded to better reflect this difference. Much of the discussion during the telephone interviews centered on the difference between having software within the wireless device "select" a rate to be used for a communications charge, as in Applicants' invention, and having the wireless device receive a rate from the network switch which can then be used to "calculate" a projected communications charge, as in the cited Grimes patent. Applicants' attorney pointed out that none of the cited prior art discloses having a multi-factor billing algorithm within the wireless device "select" a rate for data communication based upon the factors claimed by Applicants and then use that internally selected rate to calculate an actual data communication charge. Applicants' attorney and Examiner Ly then discussed specific amendments which could be made to Applicants' claim 2 to better distinguish the cited prior art. On October 18, 2007, Applicants' attorney and Examiner Ly agreed that if claim 2 was reworded in the form presented in this Amendment, it would overcome the cited Grimes and Barabash patents.

B. Prior Art Rejections

1. The Invention

Applicants have invented a multi-factor data rating algorithm programmed into a wireless device to select a rate for a data communication and then calculate charges assessed for that data communication so that those charges can be deducted from an account related to the wireless device. Unlike existing systems which calculate wireless communication charges by having the network server select a rate based upon distance or time-of-day and then multiplying that network-supplied rate by the duration of the phone call, Applicants' data rating algorithm allows the wireless device itself to select one or more rates applicable to the data communication session as determined by type of data, source of data, service level selected and/or service level achieved. The rate is a quantity of money per unit of measure and the units of measure include the quantity of bytes, quantity of data packets and/or other denomination of data quantity. After a charge is determined by applying a rate to a number of units of measure, the charge is deducted from an account (e.g., prepaid or credit limit) related to the wireless device. In some embodiments, the selection of rates and units of measure is triggered by the data rating algorithm detecting one or more events which take place during the course of setting up the data communication session (e.g., a detected connection between the wireless device and the network).

2. The Cited Art Distinguished

Claims 2-3, 5-6, 9-11, 13-19, 24-25, 27-28, 31-33, 35-41, 46-47, 49-50, 53-62, 87-88, 90-91, 94-96 and 98-104 have been rejected under 35 U.S.C. § 103(a) as being obvious over Grimes' U.S. Patent No. 6,434,537 ("Grimes patent") in view of Barabash's U.S. Patent No. 6,101,378 ("Barabash patent").

The Grimes patent discloses a system for informing a cellular telephone user of cumulative billing information, downloading a charge rate for the current voice call, and then calculating a projected charge for the current voice call based on the downloaded charge rate and duration of the call. The cumulative billing information and the current charge rate are downloaded from the network.

The Barabash patent discloses a prepaid cellular telephone system in which a network billing computer (the debit processing unit) maintains a prepaid account for the subscriber, debits the prepaid account as the subscriber makes and receives calls, and instructs the network to deny a call (or instructs the phone to disable itself) if the account balance is insufficient. The debit processing unit and mobile phone can communicate with each other using short bursts of data over the voice channel.

As discussed during the telephone interviews, the disclosure in the Grimes and Barabash patents is significantly different from Applicants' invention because, among other things, neither the Grimes patent nor the Barabash patent teach a multi-factor algorithm which internally *selects* a rate to be used for the calculation of data communication charges. In both the Grimes and Barabash patents, the rate to be used for calculating communications charges is selected at the *network switch*. While, as noted by the Examiner, Grimes does "calculate" a projected charge within his cellular telephone, the rate used for this calculation is selected at the network switch and then downloaded into the cellular telephone (see Grimes' Abstract, column 1 line 67 - column 2 line 1; Figure 1; column 2 lines 57-59; column 3 lines 15-19 and lines 56-61; column 3 line 66 - column 4 line 7; Figure 3; column 4 lines 47-53). By contrast, in Applicants' invention, the rates are selected within the wireless device by the internal multi-factor data rating algorithm (see Applicant's Abstract, ¶ 3, ¶ 10, ¶ 11, and others).

Moreover, the Grimes patent does not teach Applicants' data communication rating techniques. The Grimes patent teaches the typical method for rating a voice communication, namely multiplying the charge rate by the duration (or air time) of the call. Grimes does not teach any of the factors that are used in Applicants' multi-factor data rating algorithm, such as type of data, source of data, service level selected and/or service level achieved. Nor does the Grimes patent teach any of Applicants' units of measure that are useful for metering a data communication, such as quantity of bytes, quantity of data packets and/or other denomination of data quantity (see, paragraphs 10, 19, 33 and others of Applicant's patent application). Although the Grimes patent excerpt cited by the Examiner (e.g., Grimes patent, column 2, line 67 to column 3, line 5) describes a number of factors that affect the charge rate, the only unit of measure described is "the elapsed air time".

The selection of rates and units of measure within Applicants' wireless device using Applicant's multi-factor data rating algorithm is an important advantage of Applicants' invention over existing network centric billing systems. As explained in paragraphs 6 through 9 of Applicants' patent application, monitoring and keeping track of data packets accurately for billing purposes at the network level is not a simple task. When data packets are sent to a destination, they are usually routed via several nodes and networks before they reach their final destination. Traversing several networks presents a problem from a monitoring and billing perspective because different networks often handle and bill data packets differently. The problem of accounting for data transmission is further complicated when the network(s) needs to resend some packets, possibly through alternative routes. As such, a complicated arrangement of servers and protocols is needed to coordinate billing information between networks, and among nodes within the same network, for the typical data communication.

By contrast, in Applicants' system, all the rates for data billing are selected by the multi-factor algorithm residing within the wireless device itself. In Applicants' system, there is no need for network servers to coordinate among themselves to determine the rate to be applied for a data transmission. As such, Applicants' decentralized approach (i.e., within the wireless device) to data billing removes a great deal of the burden borne by network servers under the common centralized approach to data billing.

As previously noted, once these differences between Applicants' system and the prior art Grimes/Barabash systems were explained during the telephone interviews with the Examiner, the Examiner agreed that Applicants had overcome the Examiner's prior art rejections based upon the Grimes and Barabash patents for newly amended claim 2.

Claims 7-8, 12, 29-30, 34, 51-52, 92-93 and 97 have been rejected under 35 U.S.C. § 103(a) as being obvious over the Grimes patent in view of the Barabash patent and further in view of various combinations of Schmid's U.S. Patent No. 5,887,249 ("Schmid patent"), Applicants' so-called admitted prior art and Schilling's U.S. Patent No. 7,137,548 ("Schilling patent").

The Schmid patent discloses a method for establishing a cellular service account in which the cellular system sends prompts for account information to the cellular radio

telephone, the cellular radio telephone sends a response with account information to those prompts back to the cellular system, and the cellular system stores the account information to establish the cellular service account. The Schmid patent does not teach an account that resides within the wireless device. In fact, Schmid clearly distinguishes between the cellular radio telephone and the cellular system in teaching that the cellular system stores the account information (see Schmid Abstract, see also column 2 lines 34-36 and lines 51-53). Also, the Schmid patent does not teach that rates for a communication session are selected by a data rating application within the wireless device, much less use of Applicants' enumerated factors to select an appropriate rate. By contrast, Applicants' invention teaches that the rates are determined within the wireless device by an internal multi-factor data rating algorithm (see Applicant's Abstract and paragraphs 3, 10, 11 and others of Applicant's patent application) and teaches factors and units of measure that are useful for rating a data communication (see paragraphs 10, 19, 33, 38 and others of Applicant's patent application).

With respect to Applicant's so-called "admitted prior art", while Applicants' discussion in the "Background of the Invention" section may imply an account residing at a location external to the wireless device ("billing systems reside at a mobile switching center"), there is no disclosure or suggestion in Applicants' patent application that the prior art teaches rates for a data communication session being selected by a multi-factor data rating algorithm within the wireless device.

The Schilling patent discloses the application of removable debit/credit cards or smart cards in radio or fixed wire telephone systems. The removable card stores telephone numbers associated with the owner of the card so that, upon insertion of the card into a telephone with a card reader, the telephone receives calls associated with the owner of the card. In some embodiments, the card stores an available debit/credit amount. In other embodiments, a telephone is equipped with a card writer that permits the available debit/credit amount stored on the card to be rewritten. Although the Schilling patent discloses maintaining an available balance on a smart card for display or warning purposes, it does not suggest or disclose a multi-factor data rating algorithm residing on a smart card. Rather, the Schilling patent discloses an "end station", external to the smart card and telephone, as the means for accounting for call

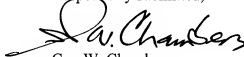
charges (see column 13 line 62 - column 14 line 25) and thus teaches away from having a multi-factor data rating algorithm reside in the smart card or telephone.

In sum, none of the cited references disclose a multi-factor data rating algorithm within a wireless device (or its smart card) that selects an applicable rate, using that selected rate to calculate an actual data communication charge and then deducts that charge from an account related to the wireless device (or smart card). For these reasons, the Grimes patent, either alone or in view of any combination with the Barabash patent, Schmid patent, Applicant's alleged admitted prior art and/or the Schilling patent, fails to teach Applicant's claimed invention and, as such, none of Applicant's currently pending claims are unpatentable for obviousness.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and early issuance of a Notice of Allowance is warranted. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (415) 576-0200.

Respectfully submitted,



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